UNITED STATES TELEPHONE ASSOCIATION

Post-Retirement Health Care Study
Summary of Data on National Prevalence of
Post-Retirement Medical Benefit Plans
(Source = United States General Accounting Office)

Covered Employees* by Industry

Industry	Total Employees	Covered Employees	% Total Employees Who Are Covered	% of Covered Employees in Industry
Agriculture, Mining, Manufacture & Wholesale Trade	26,729,660	11,602,872	43.4%	30.17%
Construction	4,592,367	562,891	12.3%	1.46%
Transportation & Utilities	11,674,827	8,853,209	75.8%	23.02%
Retail Trade	15,717,209	3,962,734	25.2%	10.31%
Finance & Insurance	28,210,193	10,431,800	37.0%	27.13%
Consumer Services	8,895,653	3,040,556	34.2%	7.91%
TOTAL	95,819,909	38,454,062	40.1%	100.00%

Covered Employees* by Company Size

Company Size	Total Employees	Covered Employees	% Total Employees Who Are Covered	% of Covered Employees by Company Size
1-24 Employees	13,384,195	556,209	4.2%	1.45%
25-99 Employees	12,713,231	1,663,938	13.1%	4.33%
100-499 Employees	19,631,184	3,847,903	19.6%	10.00%
500+ Employees	50,091,299	32,386,012	64.7%	84.22%
TOTAL	95,819,909	38,454,062	40.1%	100.00%

*Covered Employees means employees who work for companies which sponsor post-retirement medical plans. The GAO estimates that only 30.7 million of the 38.5 million covered employees actually could potentially qualify to receive coverage from company sponsored plans. The remaining 7.8 million employees represent those working for non-covered groups within the company (e.g. a subsidiary hich does not participate in the company's plan) or employees who are covered by multi-employer plans which are not subject to SFAS 106.

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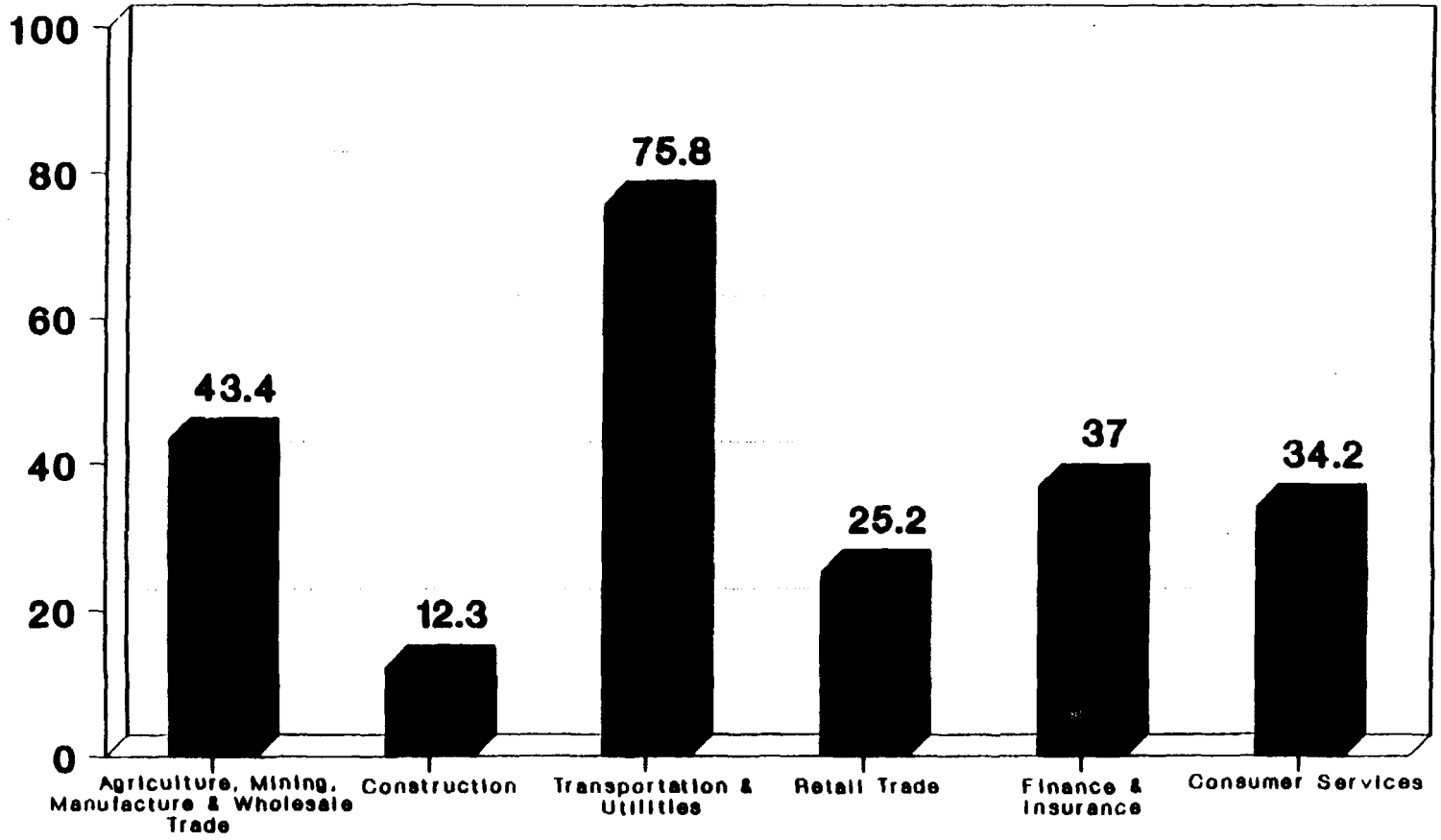
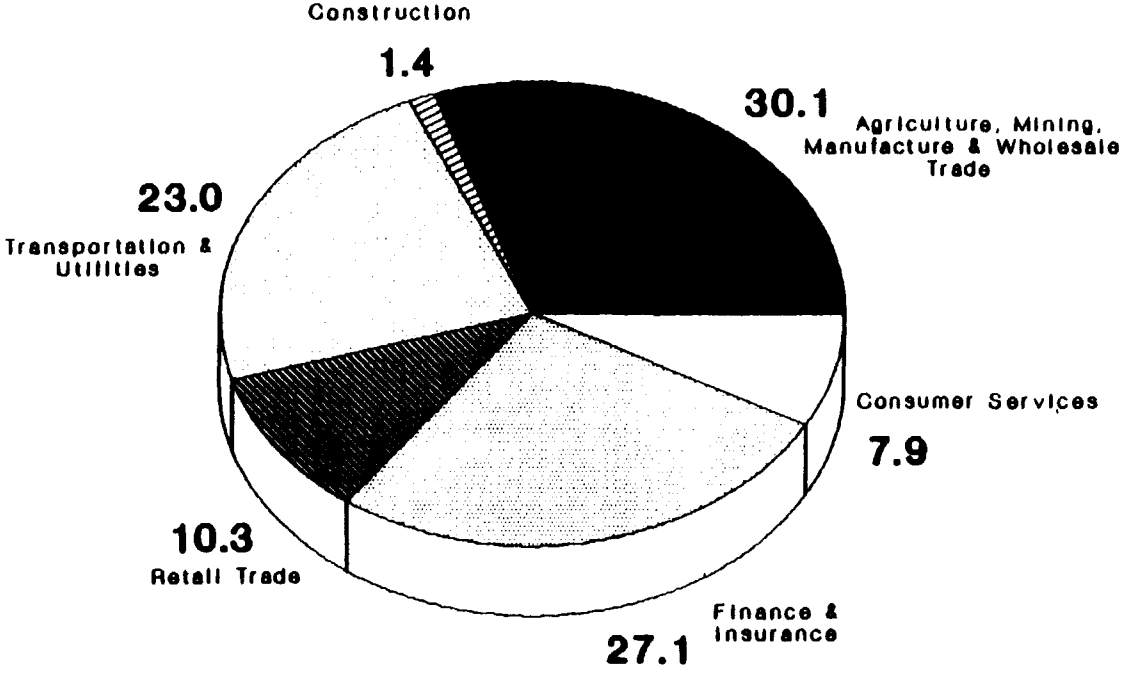


% Total EE's Who Are Covered by Industry

(Source = United States General Accounting Office)

Godwins

United States Telephone Association
Post-Retirement Health Care Study
Summary of Data on National Prevalence of Post-Retirement Medical Benefit Plans



% of Covered Employees by Industry

(Source = United States General Accounting Office)

Godwins

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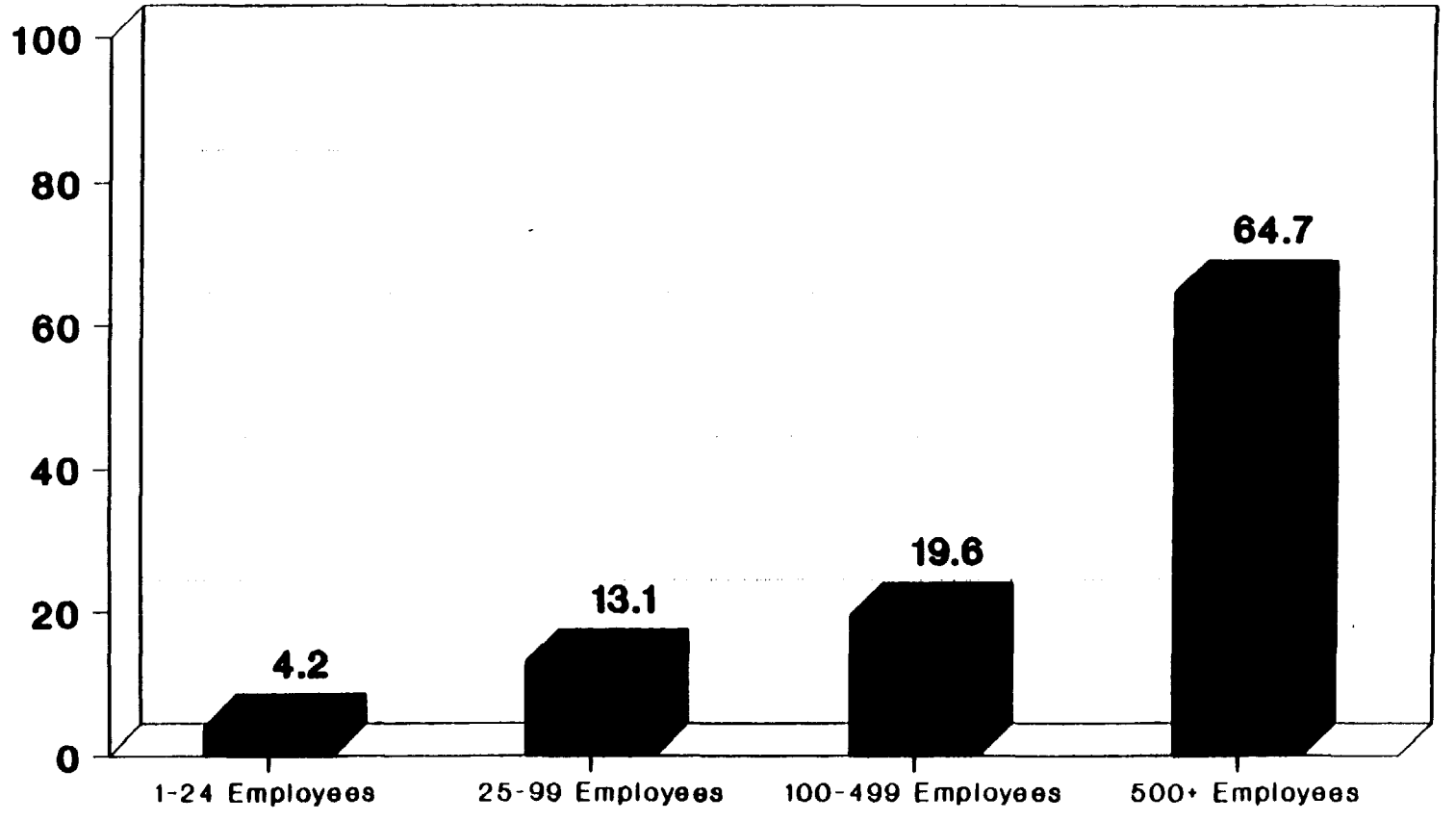

% Total EE's Covered by Company Size

(Source = United States General Accounting Office)

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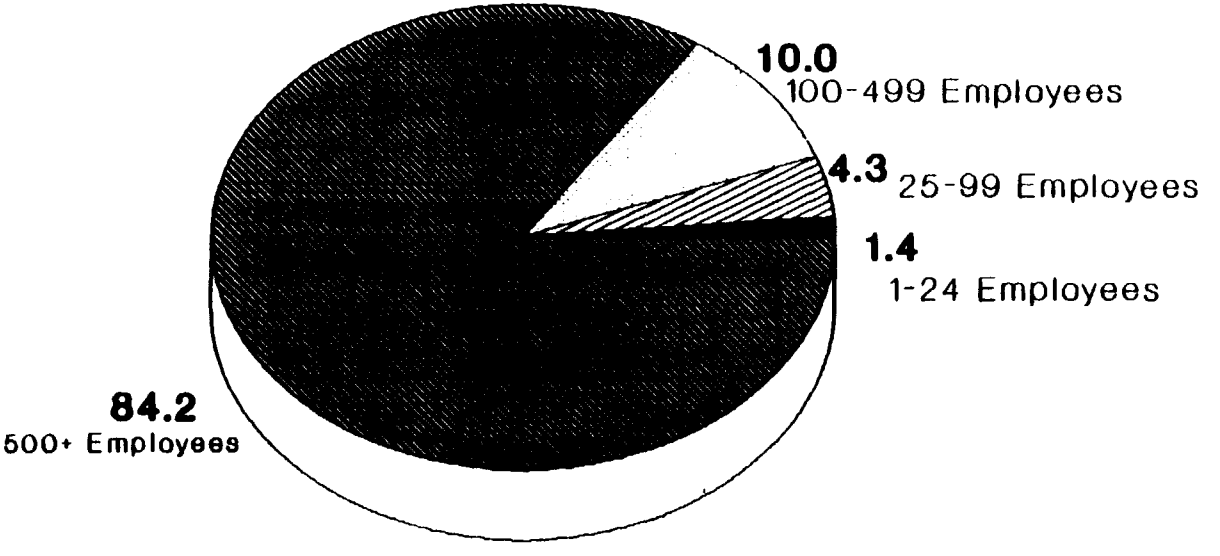
Summary of Data on National Prevalence of Post-Retirement Medical Benefit Plans



% of Covered Employees by Company Size

(Source = United States General Accounting Office)

Godwins

APPENDIX B - METHODS AND ASSUMPTIONS

Below is a description of the key methods and assumptions used for the derivation of the Demographic Adjustment as well as the basic BLI calculations. The methods and assumptions utilized in developing the other Adjustments are sufficiently documented in Section III.

Demographic Adjustment

The three adjustments making up the Demographic Adjustment were developed by calculating and comparing SFAS 106 costs for sample populations incorporating the GNP and TELCO demographic characteristics based on the age and service distribution of GNP and TELCO employees respectively. The calculations utilized pre- and post-65 per capita claim amounts that bear the same relationships to each other as do the pre- and post-65 BLIs for GNP and TELCO. All assumptions other than withdrawal, and retirement age (already discussed) were as follows:

discount rate - 8.13%
trend rate - 10.08% in 1991 decreasing gradually to 5.56% for the year 2006 and later
retirement eligibility - 55
amortization period for transition obligation - 20 years
percent married - 65%

BLI Calculations

The calculation of individual plan Benefit Level Indicators used the following data and methods.

A data base of annual claim amount distributions was used, based on the experience of 39,436 retirees who participate in employer sponsored post-retirement medical programs administered by a large national insurance company. For pre- and post-65 claimants, frequency weights, monetary weights, hospital/

drug/other ratios and Medicare reimbursements by type were developed. This data base has 35 claim ranges with average claim amounts in each range from $15 to $48,753.

The calculations also used our data base of the post-retirement medical plan provisions for 830 private sector employers. For both comprehensive and base plus plans the following data items were available;

- hospital room and board, either as days covered or a percentage
- surgical coverage
- in-patient physician coverage
- out-patient physician coverage
- diagnostic coverage
- prescription drug coverage, either percentage or flat dollar co-pay
- major medical deductibles
- major medical co-pay percentage
- out-of-pocket maximums
- annual/lifetime maximums
- Medicare integration method (i.e., carve-out, supplement or coordination of benefits)
- participant and dependent contribution rates

These provisions are available separately for pre- and post-65 claimants.

A particular plan's gross BLI was computed by determining how much the plan would reimburse at each claim amount in the distribution data base. The reimbursement amount was determined separately for each type of charge; e.g., hospital, drug, etc. Medicare reimbursement was taken into account explicitly for each type of charge based on the form of Medicare integration in the plan. Each reimbursement was then divided by the corresponding claim to obtain a reimbursement ratio. These ratios were then weighted by the claim amount weights in the distribution to determine the gross BLI.

Per retiree contribution rates were then compared to per retiree claim amounts, and that ratio was used as an offset to the gross BLI to determine the final net pre- and post-65 BLIs for each company in the data base.

After average pre- and post-65 BLIs had been determined for GNP and TELCO (see Section III page 11 for methodology), pre- and post-65 weightings were calculated as the percentages of total SFAS 106 cost associated with pre- and post-65 claims, determined using the same methodology as for the Demographic Adjustment. These were then applied to the pre- and post-65 BLIs to develop GNP BLI and TELCO BLI.

By way of illustration, suppose a comprehensive plan pays 80% after a $200 deductible, subject to an out-of-pocket maximum of $1,500. After 65, Medicare integration is 'Supplement'. Participants contribute $10 per month.

In the $4,000 - $5,000 claim range, for example, we find the average claim to be $4,479. Since this is a comprehensive plan, we derive the pre-65 reimbursement utilizing the total claim amount, that is (4,479 - 200) times 80%, or $3,423. The out-of-pocket maximum has not been met. Therefore, the pre-65 reimbursement ratio in the charge range is 0.7642. The ratios for all ranges are averaged using weights given by the distribution table to determine the gross pre-65 BLI.

The post-65 reimbursement recognizes Medicare integration, in this example the method is Medicare Supplement. We determine the breakdown of charges to be $1,776 for hospital, $567 for prescription drugs, and $2,136 for all other charges. Total Medicare reimbursement is $2,047 (calculated explicitly from

Medicare provisions) and is immediately taken out; in this case $1,177 from hospital, $870 from other medical charges and nothing from drug charges. The plan provisions are then applied to the balance of $2,432, giving a plan reimbursement of $1,786 ((2,432 - 200) times 80%). This produces a post-65 reimbursement ratio of 0.3987 for this claim range. As with the pre-65 case the ratios for all ranges are then averaged using weights given by the distribution table to determine the gross post-65 BLI.

The gross BLIs are then adjusted to reflect participant contributions. Our example here might produce gross BLIs of 0.85 pre-65 and 0.32 post-65. The participant contribution of $10 per month translates into a reduction in the gross BLIs of 0.03 pre-65 and 0.04 post-65, giving final BLIs of 0.82 and 0.28 respectively.

NYASZ #157

Appendix C

Part I: Derivation of the Model

I. Households

All households are assumed to be identical and obtain utility from money and leisure as well as each of the m produced goods. Each household solves the following maximization problem

$$(A1)\quad U^* = \max_{(C_i,M,N)} \left(C^{\gamma}(M/P)^{1-\gamma} - (\phi N^{\eta+1})^{1/\eta}\right)$$

subject to the constraint that

$$(A2)\quad M + \Sigma_i P_i C_i = I$$

where

$$(A3)\quad C = (\Sigma_i \alpha_i C_i^{(\theta-1)/\theta})^{\theta/(\theta-1)}$$

$$(A4)\quad P = (\Sigma_i \alpha_i^{\theta} P_i^{1-\theta})^{1/(1-\theta)}$$

and C_i is the consumption of produced good i, P_i is the nominal price of produced good i, M is the amount of money held at the end of the period, N is the amount of labor supplied, I is the total nominal value of resources available to the household, C is the bundle of consumption goods defined by the aggregator function in (A3), and P is a price index defined in (A4). (Note that the price index P in (A4) is not the fixed-weight GNP price index. The solution of the model produces prices for each of the m goods which can then be combined to calculate the appropriate fixed-weight GNP price index.) The parameters of the utility function are γ, which equals the share of the household's nominal expenditure on produced goods rather than on money balances; θ, which is the elasticity of substitution between the consumption of any pair of goods; α_i, i = 1,...,m, which indicate the weight of each good in the household's utility function; η, which is the elasticity of labor supply; and ϕ which characterizes the degree of disutility of labor.

The utility function in equation (A1) is additively separable between (C_i,M) and N. This separability allows us to solve the household's maximization problem in two stages. First, we will maximize utility with respect to C_i and M, and then we will choose the utility-maximizing level of labor supply N. Choosing C_i and M to maximize the utility function in (A1) subject to the constraint in (A2) yields the following first-order conditions:

$$(A5)\quad \alpha_i C_i^{-1/\theta} \gamma C^{\gamma-1+1/\theta}(M/P)^{1-\gamma} = \mu P_i$$

$$(A6)\quad (1-\gamma)C^{\gamma}(M/P)^{-\gamma}/P = \mu$$

where μ is the Lagrange multiplier on the constraint (A2).

Combining the first-order conditions (A5) and (A6) yields

(A7) $\alpha_i C_i^{-1/\theta} \gamma C^{(1-\theta)/\theta} M = (1-\gamma) P_i$

Multiplying both sides of (A7) by C_i and then summing over all i yields

(A8) $\Sigma_i \; P_i C_i = (\gamma/(1-\gamma))\; M$

Substituting (A8) into (A2) yields

(A9) $M = (1-\gamma) I$

Substituting (A9) into (A7), summing over all i, and using the definition of the price index in (A4) yields

(A10) $PC = \gamma I$

Substituting (A9) into (A7) and then using (A10) yields the demand for good i

(A11) $C_i = \alpha_i^{\theta} (P_i/P)^{-\theta} \gamma I/P$

Substituting (A9) into (A11) yields

(A12) $C_i = \alpha_i^{\theta} (P_i/P)^{-\theta} (\gamma/(1-\gamma)) M/P$

Having solved for the optimal values of C_i and M, we now solve for the optimal value of labor supply N. First, substitute the optimal values of C_i (eq. A11) and M (eq. A9) into the utility function in (A1) to obtain

(A13) $U^* = \max_N \; (\gamma^{\gamma}(1-\gamma)^{1-\gamma}(I/P) - (\phi N^{\eta+1})^{1/\eta})$

subject to $I = wN + rK^* + M + \pi$, where π is the (present value of) post-retirement health benefits to be received by the household.

The first-order condition for labor supply N is

(A14) $\gamma^{\gamma}(1-\gamma)^{1-\gamma}(w/P) = ((\eta+1)/\eta)(\phi N)^{1/\eta}$

which can be solved to obtain N*, the optimal amount of labor supplied

(A15) $N^* = \nu(w/P)^{\eta}$

where $\nu = [\gamma^{\gamma}(1-\gamma)^{1-\gamma}\eta/(\eta+1)]^{\eta}\phi^{-1}$

II. Firms

Each of the m goods is produced by competitive firms with Cobb-Douglas production functions. The total production of good i, Y_i, is given by the production function

(A16) $Y_i = A_i N_i^{\rho_i} K_i^{1-\rho_i}$ $\quad i = 1,\ldots,m$

The firms are assumed to be competitive and thus take the nominal price of their output, P_i, the nominal rental price of capital, r, and the nominal price of labor, $D_i w$, as fixed. Note that the nominal price of labor consists of two parts: w reflects the nominal wage rate excluding the cost of post-retirement health benefits covered by FAS 106. The factor D_i reflects the impact on the cost per unit of labor of post-retirement health benefits covered by FAS 106. For firms that do not offer post-retirement health benefits, $D_i = 1$. For firms that offer such benefits, $D_i > 1$. Competitive firms choose N_i and K_i to maximize

(A17) $P_i A_i N_i^{\rho_i} K_i^{1-\rho_i} - wD_i N_i - rK_i$ $\quad i = 1,\ldots,m$

The first-order conditions for labor and capital are

(A18) $\rho_i P_i Y_i / N_i = wD_i$ $\quad i = 1,\ldots,m$

(A19) $(1-\rho_i) P_i Y_i / K_i = r$ $\quad i = 1,\ldots,m$

Given the nominal wage w and the FAS 106 factor D_i, (A18) determines the amount of labor demanded in sector i; given the rental price of capital, (A19) determines the amount of capital demanded in sector i.

III. Market Equilibrium

Equilibrium in the factor markets requires that the aggregate amount of labor demanded equal the supply of labor and the aggregate amount of capital demanded equal the supply of capital:

(A20) $\Sigma_i N_i = N^*$

(A21) $\Sigma_i K_i = K^*$

The amount of money demanded equals the amount initially held by consumers

(A22) $M = M^*$

The amount of good i produced must equal the amount of good i demanded, so that using (A12) we obtain

(A23) $Y_i = \alpha_i^{\theta} (P_i/P)^{-\theta} (\gamma/(1-\gamma)) M/P$

The nominal value of production must equal the nominal value of total factor payments, including the (present value of the) cost of post-retirement health benefits,

$$(A24) \quad \Sigma_i P_i Y_i = rK^* + w\Sigma_i D_i N_i$$

The nominal value of total resources available to the household, I, equals the initial holding of money M^* plus capital income rK^*, wage income, $w\Sigma_i N_i$, and the present value of post retirement health benefits $\pi = w\Sigma_i(D_i - \bar{I})N_i$ so that

$$(A25) \quad I = M^* + rK^* + w\Sigma_i D_i N_i$$

The solution to the model consists of the equilibrium conditions (A20) - (A25), the production functions (A16), the labor demand equations (A18), the capital demand equations (A19), and the definition of the price index (A4).

Part II: Calibration of the model

The model is calibrated so that in the absence of FAS 106 it yields an allocation of labor across sectors that matches the actual allocation of labor across sectors. It is also calibrated such that in the absence of FAS 106, all nominal prices are equal to one.

Inputs to the calibration procedure:

η, the elasticity of labor supply

θ, the elasticity of substitution between the consumption of any two goods

γ, the share of nominal expenditure devoted to produced goods

N_o^*, the initial total amount of labor to be allocated across sectors

K*, the fixed total amount of capital to be allocated across sectors

ρ_i, the share of labor in total cost in sector i

D_i, the FAS 106 cost factor in sector i (equal to 1 in the absence of FAS 106)

$s^N_i = N_i/N^*$, the fraction of labor employed in sector i

In the initial calibration, all nominal prices are set equal to one

(B1) $P_i = 1, \qquad i = 1,\ldots,m$

(B2) $P = 1$

The amount of labor initially used in each sector follows directly from the fraction of the labor force employed in sector i, s^N_i, and the total amount of labor employed, N_o^*

(B3) $N_i = s^N_i N_o^* \qquad i = 1,\ldots,m$

Define $s^Y_i = P_iY_i/\Sigma_iP_iY_i$ to be the share of sector i's output P_iY_i in total output $\Sigma_iP_iY_i$. Then using the labor demand equation (A18) and the fact that the total amount of labor employed is N_o^*, it can be shown that

(B4) $s^Y_i = (D_is^N_i/\rho_i)/\Sigma_i(D_is^N_i/\rho_i) \qquad i = 1,\ldots,m$

Using the capital demand equation (A19) and the fact that the total amount of capital used is K^*, it can be shown that

(B5) $K_i = [(1-\rho_i)s^Y_i/\Sigma_i(1-\rho_i)s^Y_i]\ K^* \qquad i = 1,\ldots,m$

Normalize $A_1 = 1$ so that the production function in the first sector is

(B6) $Y_1 = N_1^{\rho_1} K_1^{1-\rho_1}$

Using Y_1 from (B6), the nominal wage and the nominal rental price of capital can be determined from the first-order conditions (A18) and (A19) for sector 1 to obtain

(B7) $w = \rho_1 Y_1 P_1/(D_1 N_1)$

(B8) $r = (1-\rho_1) Y_1 P_1/K_1$

Now calculate ν in the labor supply curve (eq. A15) as

(B9) $\nu = N_o^* (P/w)^{\eta}$

To calibrate A_i, $i = 2,\ldots,m$, substitute the production function (A16) into the first-order condition for labor (A18) and set $P_i = 1$ (eq. B1) to obtain

(B10) $A_i = (D_i w/\rho_i)(N_i/K_i)^{1-\rho_i}$ $\qquad i = 2,\ldots,m$

Now set all prices equal to 1 in the equilibrium condition (A23), and use (A22) to obtain

(B11) $Y_i = \alpha_i^{\theta}(\gamma/(1-\gamma))M^*$

Summing (B11) over all i we obtain

(B12) $\Sigma_i Y_i = (\gamma/(1-\gamma))M^* \Sigma_i \alpha_i^{\theta}$

Now observe that with $P = P_i = 1$ for all i, equation (A4) implies that

(B13) $\Sigma_i \alpha_i^{\theta} = 1$

Substituting (B13) into (B12) and rearranging yields

(B14) $M^* = ((1-\gamma)/\gamma)\ \Sigma_i Y_i$

Finally, substituting (B14) into (B11) and recalling that when $P_i = P = 1$, $s^Y_i = Y_i/\Sigma Y_i$, we obtain

(B15) $\alpha_i^{\theta} = s^Y_i$ $\qquad i = 1,\ldots,m.$

Exhibit 7

1991 Pay-As-You-Go Expense ($000's)

	Total Company	Subject To Separations	Interstate
1. Medical/Dental-Retiree	136,785	130,530	27,783
2. Contributions to VEBA for Active Employees			
a. Expense	86,182	82,241	17,505
b. Capital	8,572	8,504	2,013
c. Depreciation	306	303	73
3. Medicare Part B	14,271	13,618	2,899
4. Group Life	108	103	22
5. Total Pay-As-You-Go Operating Expense (Ln 1 + Ln 2a + 2c + Ln 3 + Ln 4)	237,652	226,795	48,282
6. Total Pay-As-You-Go Capital (Ln 2b)	8,572	8,504	2,013

1992 Pay-As-You-Go Expense ($000's)

	Total Company	Subject To Separations	Interstate
1. Medical/Dental-Retiree	159,971	152,656	32,493
2. Contributions to VEBA for Active Employees			
a. Expense	72,030	68,736	14,630
b. Capital	6,936	6,881	1,629
c. Depreciation	247	245	59
3. Medicare Part B	14,669	13,998	2,979
4. Group Life	135	129	27
5. Total Pay-As-You-Go Operating Expense (Ln 1 + Ln 2a + 2c + Ln 3 + Ln 4)	247,052	235,764	50,188
6. Total Pay-As-You-Go Capital (Ln 2b)	6,936	6,881	1,629

Notes: 1) Subject to Separations amounts were calculated by study area by applying ARMIS 43-01 regulated ratios to total company amounts.

2) Interstate amounts were calculated by study area by applying ARMIS 43-01 interstate ratios to subject to separations amounts.

Exhibit 8

	7/1/90 to 6/30/91 Pay-As-You-Go Expense ($000's)		
	Total Company	Subject To Separations	Interstate
1. Medical/Dental-Retiree	125,044	119,516	25,567
2. Contributions to VEBA for Active Employees			
a. Expense	91,535	87,488	18,715
b. Capital	9,332	9,098	2,163
c. Depreciation	334	331	80
3. Medicare Part B	14,100	13,477	2,883
4. Group Life	97	93	20
5. Total Pay-As-You-Go Operating Expense (Ln 1 + Ln 2a + 2c + Ln 3 + Ln 4)	231,110	220,905	47,265
6. Total Pay-As-You-Go Capital (Ln 2b)	9,332	9,098	2,163

Exhibit 9

1991 POSTRETIREMENT

MEDICAL VALUATION

ASSUMPTIONS

Summary

1991 Postretirement Medical Valuation Assumptions

ITEM	ASSUMPTION	JUSTIFICATION
Discount Rate	7.50%	The discount rate was selected after a review of Treasury bond rates during 1991
Health Care Cost Trend	See Table 1	The 1991 trend rate was based on recent Ameritech experience and near term expectations. The ultimate rate in year 2006 was selected to be consistent with the underlying inflation in the discount rate and to reflect the extension of manageed care to retirees.
Medicare Reimbursement Trend Rate	See Table 2	The increase rates were selected to be consistent with health care cost trend rate and current Medicare law.
Per Capita Claims	See Table 3	The costs were based on an analysis of Ameritech experience for 1990 for each of the plans. Average costs were spread by age using standard Towers Perrin age factors.
Turnover	See Tables 4, 5, 6, and 7	The tables were based on telephone industry experience.
Retirement Age	See Tables 9, 10, 11, and 12	The tables were based on telephone industry experience.
Mortality	See Tables 13 and 14	The tables were based on telephone industry experience.
Percentage with Eligible Spouses	See Table 15	The table was based on telephone industry experience.
Percentage Participating	100%	These are non-contributory plans, thus all retirees and eligible spouses automatically participate.
Disablement	None assumed	No significant effect on costs.

Table 1

1991 Health Care Trend Rates

YEAR	INCREASE
1991	10.0%
1992	9.6%
1993	9.2%
1994	8.8%
1995	8.4%
1996	8.0%
1997	7.6%
1998	7.2%
1999	6.8%
2000	6.4%
2001	6.0%
2002	5.6%
2003	5.2%
2004	4.8%
2005	4.4%
2006 and later	4.0%

Table 2

1991 Medicare Reimbursement Trend Rates

YEAR	INCREASE
1991	10.0%
1992	9.6%
1993	9.2%
1994	8.8%
1995	8.4%
1996	8.0%
1997	7.6%
1998	7.2%
1999	6.8%
2000	6.4%
2001	6.0%
2002	5.6%
2003	5.2%
2004	4.8%
2005	4.4%
2006 and later	4.0%

Table 3

1991 Per Capita Claims Costs -- Management Plans

COMPREHENSIVE HEALTH CARE PLAN

AGE	RETIREE	SPOUSE
45-49	$1,701	$1,349
50-54	1,971	1,564
55-59	2,378	1,886
60-64	2,874	2,280
65-69*	1,034	861
70-74*	1,157	963
75-79*	1,296	1,079
80-84*	1,420	1,182
85 and older*	1,471	1,225

MEDICAL EXPENSE PLAN

AGE	RETIREE	SPOUSE
45-49	$3,797	$2,972
50-54	4,402	3,445
55-59	5,309	4,155
60-64	6,418	5,023
65-69*	1,126	976
70-74*	1,261	1,093
75-79*	1,411	1,224
80-84*	1,546	1,340
85 and older*	1,602	1,389

* Net of Medicare

Table 3

1991 Per Capita Claims Costs -- Non-Management Plans

COMPREHENSIVE HEALTH CARE PLAN

AGE	RETIREE	SPOUSE
45-49	$1,656	$1,029
50-54	1,920	1,192
55-59	2,316	1,438
60-64	2,800	1,738
65-69*	1,074	907
70-74*	1,202	1,016
75-79*	1,348	1,137
80-84*	1,474	1,246
85 and older*	1,528	1,291

MEDICAL EXPENSE PLAN

AGE	RETIREE	SPOUSE
45-49	$3,823	$2,279
50-54	4,431	2,642
55-59	5,345	3,186
60-64	6,461	3,852
65-69*	1,143	1,032
70-74*	1,279	1,155
75-79*	1,433	1,293
80-84*	1,570	1,416
85 and older*	1,627	1,468

* Net of Medicare

TABLE 4

1991 ACTUARIAL ASSUMPTIONS

AMERITECH MANAGEMENT MALE EMPLOYEES

ANNUAL RATES OF SEPARATION BEFORE RETIREMENT

service in year t	rates of separation during year t + 1/2 to t + 1 1/2 for employees entering service at age:							
	15	20	25	30	35	40	45	50
0	0.105	0.105	0.105	0.102	0.096	0.091	0.088	0.089
1	0.074	0.072	0.070	0.066	0.062	0.059	0.058	0.059
2	0.046	0.045	0.044	0.042	0.040	0.037	0.035	0.036
3	0.020	0.026	0.032	0.032	0.025	0.025	0.031	0.031
4	0.018	0.019	0.027	0.025	0.018	0.020	0.022	0.026
5	0.014	0.016	0.024	0.021	0.016	0.016	0.019	0.022
6	0.012	0.014	0.021	0.018	0.016	0.015	0.016	0.020
7	0.011	0.013	0.018	0.016	0.016	0.013	0.014	0.024
8	0.009	0.011	0.016	0.015	0.016	0.013	0.013	0.028
9	0.009	0.010	0.013	0.014	0.013	0.011	0.014	0.032
10	0.008	0.008	0.012	0.013	0.012	0.010	0.017	0.036
11	0.008	0.008	0.010	0.011	0.010	0.009	0.020	0.040
12	0.008	0.008	0.009	0.009	0.009	0.010	0.024	0.046
13	0.007	0.007	0.008	0.008	0.009	0.012	0.028	0.052
14	0.007	0.007	0.008	0.007	0.009	0.014	0.032	
15	0.006	0.006	0.006	0.006	0.009	0.017	0.036	
16	0.005	0.005	0.006	0.006	0.009	0.020	0.040	
17	0.005	0.005	0.005	0.006	0.010	0.024	0.046	
18	0.004	0.004	0.005	0.006	0.012	0.028	0.052	
19	0.004	0.004	0.005	0.007				
20	0.004	0.004	0.005	0.008				
21	0.004	0.004	0.006	0.009				
22	0.004	0.004	0.006	0.010				
23	0.004	0.004	0.006	0.012				
24	0.004	0.004						
25	0.004	0.005						
26	0.004	0.005						
27	0.005	0.006						
28	0.005	0.006						

Source: Industry-wide management experience

Note: Based on separations for all causes.

TABLE 5

1991 ACTUARIAL ASSUMPTIONS

AMERITECH MANAGEMENT FEMALE EMPLOYEES

ANNUAL RATES OF SEPARATION BEFORE RETIREMENT

service in years t	rates of separation during year t + 1/2 to t + 1 1/2 for employees entering service at age:							
	15	20	25	30	35	40	45	50
0	0.095	0.095	0.094	0.092	0.088	0.084	0.080	0.080
1	0.083	0.082	0.077	0.072	0.068	0.064	0.064	0.066
2	0.070	0.069	0.065	0.057	0.047	0.039	0.033	0.032
3	0.058	0.058	0.056	0.046	0.029	0.025	0.027	0.032
4	0.050	0.051	0.052	0.038	0.020	0.019	0.021	0.031
5	0.042	0.044	0.047	0.032	0.017	0.014	0.016	0.030
6	0.040	0.040	0.042	0.027	0.015	0.013	0.014	0.029
7	0.040	0.038	0.031	0.024	0.015	0.013	0.013	0.022
8	0.039	0.034	0.024	0.017	0.015	0.013	0.013	0.025
9	0.036	0.030	0.021	0.014	0.014	0.013	0.013	0.030
10	0.034	0.027	0.018	0.013	0.014	0.014	0.014	0.030
11	0.030	0.023	0.016	0.010	0.013	0.014	0.015	0.030
12	0.026	0.020	0.016	0.010	0.011	0.015	0.016	0.030
13	0.023	0.019	0.015	0.010	0.010	0.016	0.016	0.030
14	0.020	0.018	0.014	0.010	0.009	0.016	0.020	
15	0.017	0.016	0.013	0.010	0.010	0.017	0.022	
16	0.013	0.012	0.012	0.009	0.011	0.017	0.023	
17	0.011	0.010	0.010	0.009	0.011	0.017	0.024	
18	0.009	0.009	0.009	0.009	0.012	0.017	0.027	
19	0.007	0.008	0.009	0.009				
20	0.007	0.008	0.009	0.010				
21	0.007	0.008	0.009	0.011				
22	0.007	0.007	0.008	0.011				
23	0.007	0.007	0.008	0.012				
24	0.007	0.007						
25	0.007	0.007						
26	0.006	0.007						
27	0.006	0.008						
28	0.006	0.008						

Source: Industry-wide management experience

Note: Based on separations for all causes.